

B. AMENDMENTS TO THE SPECIFICATION

1. Please replace paragraphs [0022], [0026], [0038], and [0043] with the following replacement paragraphs (marked to show changes made):

[0022] The inventors are aware of one attempt to reduce the problem of bitumen-laden cuttings sticking to well components, by using a polymer drilling fluid containing approximately 0.3% by weight of a non-ionic surface-active agent called HME ~~Energizers~~ ENERGIZERS sold by Montello, Inc. of Tulsa, Okla. HME ~~Energizer~~ ENERGIZER[®] consists of about 10% to 30% surfactants and 70% to 90% hydrocarbon solvent, so the mud system treated with HME ~~Energizers~~ ENERGIZERS contained between 0.3 and 0.9 kilograms of surfactant per cubic meter of mud. However, this formulation did not prove effective. In such low concentrations, the HME ~~Energizer~~ ENERGIZER could not emulsify oil and bitumen from the cuttings, and in higher concentrations it would make the mud too thick to be used in the field.

[0026] The drilling fluid of the present invention, having been pumped out ~~of a~~ of an oil sand well and back to the surface, can be dewatered by adding suitable materials such as calcium, anionic or nonionic polymers, and/or cationic polymers, and then centrifuged in order to remove the unwanted cuttings.

[0038] In the preferred embodiment, the concentration of surfactants having HLB numbers equal to or greater than approximately 7 will be in the range between 0.1 kg and 60 kg per cubic meter of drilling fluid. In the preferred embodiment, the concentration of such surfactants will be in range of 2.5 to 25 kg per cubic meter. The surfactants having HLB numbers equal to or greater than approximately 7 may be selected from a group of anionic surfactants and nonionic surfactants which includes but is not limited to carboxylate salts, sulfonides, sulphates, phosphates, polyethoxylate ether, alkylphenol ethoxylates, alcohol ethoxylates, fatty acid ethoxylates, ethoxylated alkanolamide, alkyl ether phosphate, alkyl benzene

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sulfonates, ethoxylated fatty acids, castor oil ethoxylates, ~~glycerol~~ glycerol esters, ethylene oxide propylene oxide-block copolymers, nonylphenoxy poly(ethyleneoxy) ethanol, imidazolines, betaines, propionates, and amphotacetates.

[0043] The drilling fluid may also contain a carrier oil having solvent properties. The carrier oil may include but not limited to HT-40® (manufactured by Petro-Canada), ~~Drillseal~~ DRILLSOL® (manufactured by Enerchem International Inc., of Nisku, Alberta, Canada), ~~Shelleseal~~ SHELLSOL® (manufactured by Shell Chemical Company), and similar materials. In generic terms, HT-40® is a blend of synthetic isoalkane fluid and severely hydrocracked low-toxicity mineral oil. DRILLSOL® is an oil-based drilling fluid with a flash point greater than 85° centigrade and an aromatic content less than 50 parts per million. SHELLSOL® is a hydrocarbon solvent consisting essentially of isoparaffinic components and characterized by high stability and low odour. The concentration of carrier oil, where used, will be in the range between 0.1 kg and 100 kg per cubic meter of drilling fluid. In the preferred embodiment, the concentration of carrier oil will be in the range of 1.0 to 75 kg per cubic meter.

Please note that the foregoing paragraph number references correspond to the paragraph numbers in the published application (Pub. No. 20040116304).